A NERVE CONDUCTION STUDY IN HYPOTHYROID PATIENTS WITH SYMPTOMATIC Vs ASYMPTOMATIC PERIPHERAL NEUROPATHY IN CORRELATION WITH SERUM VIT B12 LEVEL

ABSTRACT

INTRODUCTION:

Hypothyroidism is a common hormonal disorder. Peripheral nervous system involvement in hypothyroidism is a well documented fact. And in hypothyroid patients there is vitamin B12 deficiency also.

OBJECTIVES:

Hence, the objective of the current study is to study about the frequency of peripheral neuropathy in hypothyroidism patients with symptoms of peripheral neuropathy by doing nerve conduction study. To find out the peripheral neuropathy in hypothyroidism patients who are asymptomatic for peripheral neuropathy by doing nerve conduction study. To find out the correlation of peripheral neuropathy in hypothyroidism patients in relation with serum vitamin B12 levels.

MATERIALS AND METHODS:

A cross sectional analytical study was performed in adult hypothyroid patients who were symptomatic and asymptomatic for peripheral neuropathy , 30 patients in each group were underwent nerve conduction study and serum vitamin B12 estimation.

RESULTS:

In our study among symptomatic group, in total ,60% patients showed decreased conduction velocity and increased latency in median nerve and sural nerve sensory electrophysiology which denotes demyelinating peripheral neuropathy. At the same time about 40% patients had no abnormal nerve conduction study .And the mean value in months for symptoms was 9.27 months (SD +/-1.9). In asymptomatic patients, in total

13% patients had abnormal sensory neural conductions of median and sural nerves suggestive of demyelinating peripheral neuropathy. In our study , among symptomatic group who were positive for nerve conduction study having a mean serum vitaminB12 level of 438.94 pg/ml(SD +/- 100.238) and in asymptomatic group with positive nerve conduction studies were having 528pg/ml(SD+/- 232) which were in normal range of serum vitamin B12.

CONCLUSIONS

There were high frequencies of peripheral neuropathy in hypothyroidism patients. Positive findings in NCS were found in 60% patients of symptomatic group and 13% patients of asymptomatic group. Most of the patients suffered by demyelinating sensory neuropathy of median nerve or sural nerve or polyneuropathy. There was a positive association of nerve conduction study with symptomatic peripheral neuropathy in hypothyroidism patients. There was no correlation found in between serum vitamin b12 level and occurrence of peripheral neuropathy in hypothyroidism patients. The nerve conduction study will be very much useful to detect peripheral neuropathy early in asymptomatic hypothyroidism patients also.

Keywords: Hypothyroidism, Peripheral Neuropathy, Symptomatic, Asymptomatic, Nerve Conduction Study, Serum Vitamin B12